A- POSTFLIGHT INSPECTION (MATERIEL)

U-2

This inspection is basically a combination of requirements for checking equipment that requires daily or frequent verification of satisfactory functioning, plus requirements that prescribe searching for defects that become apparent after the aircraft is flown. It is intended that evidence of chafing, leaks, and similar conditions be discovered and corrected during the Postflight Inspection to preclude progression of such a relatively minor problem to a state that would require major maintenance to remedy the deficiency. The Postflight Inspection is, therefore, an important function that should be performed with care.

The intervals at which the Postflight Inspection will be accomplished are contained in applicable aircraft inspection systems directives.

ELECTRICAL POWER OFF

PREPARATION: 25X1A

1. Fire extinguisher provided.

2. Landing gear downlock pins installed.

3. Wheels chocked.

4. Auxiliary static ground installed.

5. Dive flaps closed shutoff valve "OFF."

6. DD Form 781 for discrepancies.

7. Switches "OFF."

8. Necessary fairing, panels and access doors removed or opened; closed or reinstalled upon completion of the inspection.

9. Dust excluder plugs and wing, empennage, canopy and pitot covers installed upon completion of the inspection.

AIRFRAME (SYSTEM NO. 3)

1. Aircraft for cleanliness.

2. Wings, fuselage, empennage and control surfaces for damage; drain holes for obstruction.

3. Statis ground wire for security and positive contact with ground.

4. Fairings, panels, and doors for damage and insecurity.

5. Battery area for evidence of leakage or overflow of electrolyte.

6. Dive brakes track for cleanliness; flaps, tracks, and linkage for damage and insecurity; actuators, lines hoses, and connections for insecurity and evidence of leakage; lines and hoses for chafing and damage.

Enclosure N

7. Windshield and canopy for cleanliness, distortion, nicks, crazing, cracks, and scratches.

8. All required Postflight entries made in applicable forms.

9. Shoulder harnesses and safety belts for cleanliness.

LANDING GEAR (SYSTEM NO. 4)

1. Landing gear and wheels for damage and free of mud, grass and ice.

2. Shock struts for evidence of leakage; polished surfaces of shock struts and hydraulic pistons cleaned with cloth moistened in hydraulic fluid.

3. Microswitches for cleanliness, damage, and insecurity.

4. Doors and actuating mechanism for damage, insecurity and evidence of improper adjustment.

5. Wheels for evidence of overheating in area adjacent to brakes.

6. Tires for uneven wear, cuts or blisters; free of grease or oil; slippage marks for misalignment.

7. Accessible brake lines, hoses, connections and components for leakage with parking brakes "SET".

8. Accessible components, lines, hoses and connections for insecurity and evidence of leakage; lines and hoses for chaging and damage.

9. Brake system reservoir for required fluid level; filler plug for security.

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HYDRAULIC PNEUMATIC (SYSTEM NO. 5)

1. Accessible components, lines, hoses, and connections for insecurity and evidence of leakage; lines and hoses for chafing and damage.

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UTILITY (SYSTEM NO. 6)

1. Oxygen System and Components:

a. Recharge to 1850 psi.

b. Regulator for steady flow by turning the pressure control knob about 90 degrees clockwise.

c. Regulator system for leakage by ensuring that there is no audible escape of oxygen with diluter in "100% OXYGEN".

d. Regulator diaphragn and mask-to-regulator tubing for leakage when a slight pressure is applied at the open end of the mask-to-regulator tube by blowing gently with diluter lever set at "100% OXYGEN"; set regulator diluter at "NORMAL OXYGEN" upon completion of tests.

e. Hose from regulators for tears, holes, kinks and insecurity.

f. Knurled coller and hose on regulator outlet elbows properly tightened (point to suit user's convenience).

g. Flow indicators for operation. (With regulator set at "100% OXYGEN", blinker should move freely with each normal breath from mask-to-regulator tubing).

POWER PLANT (SYSTEM NO. 7)

1. Exhaust cone for soot swirls and heat streaks indicating faulty fuel nozzles. (If found, inspect inner liners, nozzles and domes).

2. Turbine wheel for broken buckets.

3. Buckets for nicks and dents behond specified tolerance.

4. Nozzle diaphragn blades for damage.

5. Engine for evidence of leakage; loose or missing nuts, bolts, studs, or clamps; proper safetying where required.

6. Diaphragm and air seal assemblies for cracks and insecurity.

FUEL (SYSTEM NO. 8)

1. Exterior of aircraft for evidence of leakage.

2. Tanks serviced; tank filler necks and cap seals for damage or excessive wear; caps for proper seating.

OIL (SYSTEM NO. 9)

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1. Engine reservoir for required servicing; filler cap for security.

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2. Exterior of fuselage for evidence of leakage.

3. System components, lines, and hoses for damage; lines and hoses for chafing.

AIR INDUCTION AND EXHAUST (SYSTEM NO. 11)

1. Air intake ducts for damage and foreign material.

2. Tailpipe for cracks and distortion beyond permissible limits; tailpipe clamp and blankets for damage and insecurity.

ELECTRICAL (SYSTEM NO. 14)

1. Spare lamps and fuses available in holders.

INSTRUMENTS (SYSTEM NO. 15)

1. Pitot head and static plates for damage and insecurity.

2. Instruments, panels and brackets for damage and insecurity.

3. Instrument cover glasses for cleanliness, cracks, and looseness; range, slippage and limit markings intact.

4. Standby compasses for discoloration of fluid and evidence of bubbles.

5. Thermocouple leads for damage and insecurity.

R & R (SYSTEM NO. 16)

1. Visually inspect the following items;

a. Antenna lead-in for damaged insulators, proper spacing from surrounding objects, and insecurity of connections.

b. Plugs for proper insertion in jacks and receptacles.

c. Junction boxes and covers for damage.

d. Headset and microphone cordage and plugs for damage and proper stowage.

REMARKS:

SIGNATURE [redacted]

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B-PREFLIGHT INSPECTION

ARTICLE NO. 353 DATE 20 OCT 56

	MECH.	INSP.
NOSE SECTION:		
1. Plastic nose & windows free of cracks & secure.		
2. ARN/6 boot for condition & closed. ARN/6 and compass secure.	[illegible]	[illegible]
3. Brake fluid for proper level & cap secure.	[illegible]	
4. Cabin pressure test fitting secure	[illegible]	
5. Pitot clean & secure, check AIRSPEED.	[illegible]	
6. Nose section clean & OK to close panel.	[illegible]	
7. Access panel installed.	[illegible]	
8. All items cleared. CREW CHIEF:	[illegible]	
COCKPIT EXTERNAL:		
1. Static holes all open.	[illegible]	
2. Canopy external handle secure.	[illegible]	
3. Lower antenna secure.	[illegible]	
4. Windshield & canopy glass cleanliness & condition.	[illegible]	
5. All items cleared. CREW CHIEF:	[illegible]	
1. Canopy antenna connection secure.	[illegible]	
2. Canopy emergency release handle locked & safetied (020 copper wire)	[illegible]	
3. Canopy for proper latching with aft hatch installed.	[illegible]	
4. Canopy seal & connection for condition.	[illegible]	
5. Brakes for solid feel.	[illegible]	
6. Rudder pedals for freedom & operation of adjustment.	[illegible]	
7. Elevator for operation & freedom.	[illegible]	
8. Aileron for operation & freedom.	[illegible]	
9. Elevator tab for operation & direction. Set to neutral.	[illegible]	
10. Aileron tab for operation & direction. Set to neutral.	[illegible]	
11. Throttle for operation & friction lock.	[illegible]	
12. U.H.F.		

COCKPIT INTERNAL: (Continued)	MECH.	INSP.
13. Alchohol & rag in map case.		
14. Instruments for condition & cleanliness.		
15. Circuit breakers set or into white line.		
16. Seat belt & shoulder straps for condition & operation.		
17. Oxygen system checked out. System pressure 1800 to 2000# cap installed, check out face heat.		
18. Warning lights for operation.		
19. Emergency battery for operation, check voltage with precision meter.		
20. Seat for condition & operation.		
21. Interior lights for operation & security.		
22. Cockpit floor cleaned.		
23. All items cleared. CREW CHIEF:		
EQUIPMENT BAY:		
1. Peacan drained, flushed & valve closed.		
2. Cockpit regulators for cleanliness & condition.		
3. Control cables for freedom, operation & turnbarrels safeties.		
4. Equipment for security in hatch & bay.		
5. Lower hatch & seal for operation & condition of latching mechanism.		
6. OK to install lower hatch.		
7. Lower hatch installed, latched and safetied.		
8. Check HF radio equipment for security.		
9. Upper hatch latching mechanism for operations.		
10. Pressure regulator safetied in flight position.		
11. OK to install upper hatch.		
12. Upper hatch installed, latched & safetied.		
13. All items cleared. CREW CHIEF:		
UPPER CROTCH BAY:		
1. Heat exchanger duct connections for security.		
2. Check for plumbing or anything riding structure.		
3. OK to close access door.		
4. Access door closed & secure.		
5. All items cleared. CREW CHIEF:		

ENGINE AIR DUCTS — MECH. — INSP.

1. R/H & L/H main ducts for cracks & cleanliness.
2. R/H oil cooler duct for cracks & cleanliness.
3. Check inlet guide vanes, compressor rotor & stator blades for dents, nicks or other evidence that the engine has ingested foreign material.
4. Run up screens removed.
5. All items cleared. CREW CHIEF:

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WING:

1. R/H wing for condition & cover plates secured.
2. R/H aileron & tab for security & condition.
3. R/H flap for security & condition.
4. R/H fuel caps secured.
5. R/H wing fillets for conditions & security.
6. R/H pogo installed & latched.
7. L/H wing for condition & cover plates secured.
8. L/H aileron & tab for security & condition.
9. L/H flap for security & condition.
10. L/H fuel caps secured.
11. L/H wing fillets for condition & security.
12. L/H pogo installed & latched.
13. L/H & R/H outboard fuel drain valves checked for water.
14. All items cleared. CREW CHIEF:

FUSELAGE

1. External skin for condition.
2. Ejector for condition.
3. Dive flap (speed brakes) for condition & hydro leaks.
4. Engine mounts & tail pipe for security.
5. All cover plates secured on top of fuselage.
6. Tail pipe & turbine for cracks or evidence of foreign material passing through turbine.
7. All items cleared. CREW CHIEF:

EMPENNAGE:

1. Stabilizer for condition.
2. Elevator & tab for condition & security.

EMPENNAGE: (Continued) MECH. INSP.

3. Elevator tab for servoaction.
4. Vertical stabilizer for condition.
5. Vent line open.
6. Rudder for security & condition.
7. Fillets for security & condition.
8. All items cleared. CREW CHIEF:

TAIL GEAR:

1. Doors for security.
2. Tires for condition.
3. Steering cables & brackets for condition & security.
4. Strut for condition & cleanliness, proper pressure is 3 extended or 3.75 inches compressed.
5. Micro switch for security & condition.
6. All items cleared. CREW CHIEF:

MAIN GEAR & WELL

1. Door for security & condition.
2. Control cables for condition, turnbarrels safetied.
3. Uplock release cable & spring secure.
4. Retract mechanism & cyl. for condition.
5. Strut for condition, proper pressure or height & cleanliness. Pressure 180 psi extended or 4.5 inches compressed.
6. Brakes for clearance & freedom of leaks.
7. Tires for condition & pressure, 240 lbs.
8. All items cleared. CREW CHIEF:

ENGINE COMPARTMENT:

1. Throttle for security & safety.
2. Main & aux. fuel tank transfer valves open & safetied.
3. Manual fuel shut off open & safetied.
4. Main fuel strainer drained or checked for water.
5. Check accumulator pressure, 800 psi.
6. Hydro Oil tank full.
7. Electrical plugs secure & safetied.
8. Fuel & oil lines secure & free of leaks.
9. Dive flap shut off valve safetied open.

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ENGINE COMPARTMENT: MECH. INSP.

10. Engine side plates installed.

11. OK to install aft lower engine cover & drain lines.

12. All items cleared. CREW CHIEF:

FINAL SIGN OFF:

1. Install lower engine cover fwd. section.

2. Remove pitot airspeed cover.

3. Remove main & tail gear down lock pins.

4. Install scissors pin in tail gear.

5. Fuel load 1335 Fuel added [illegible] Oil added 0 Oil level 13

Oxygen 1950

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6. Ship released for flight [redacted] Date 30 OCT 56 Time [illegible]

AIRCRAFT GENERAL:

1. Elect and radio pre flight.

2. Install and check special equipment.

3. Check Destr. circuit.

4. Install and connect destr.

5. Install upper hatch.

6. Pilot enter cockpit.

7. Pilot check cockpit.

8. Start MA-2 on signal from pilot.

9. Start engine.

10. Disconnect MA-2.

11. Close canopy.

12. Pull gear pins.

13. Pull chocks.

14. Chrew Chief signal all OK on outside for take-off.

15. Pick up Pogo's after take-off.

16. All items cleared. CREW CHIEF:

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AFTER LANDING:	MECH.	INSP.
1. Install Pogo's.	[illegible]	[illegible]
2. Tow aircraft to hangar.	[illegible]	
3. Check with pilot to assure all discrepancies have been entered on [redacted]	[illegible]	
4. Correct discrepancies.	[illegible]	
5. All items cleared. CREW CHIEF:	[illegible]	[illegible]

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ENGINE RUN DATA

DATE 20 Oct 56 TEST Pre-flight ARTICLE 353 OPERATION ____

START 12:35 START ____ START ____ START ____

STOP [illegible] STOP ____ STOP ____ STOP ____

TIME	12[illegible]					
RPM Idle 58-60 Max. 91-95	[illegible]					
JET TEMP. Idle 200-300 Max. 500-580	[illegible]					
FUEL PRESS. Idle 15-20 Max. 8-12	16					
START TOTALIZER	366					
END TOTALIZER	[illegible]					
ELAPSED TIME	[illegible]					
LOADMETER .05-15	[illegible]					
HYDRO. PRESS. 2800-3100	3000					
OIL PRESS. 40-50	40					
OIL TEMP. Idle 0-70 Max. 0-80	—					
ENGINE COMP. TEMP.						
AFT FUEL. TEMP.	—					
PRESS. RATION 80% 1.2-1.6 Max. 2.2-2.5	1.2					

Wing Flaps O.K.
[illegible] O.K.
[illegible] O.K.

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